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RAW SEQUENCE LISTING DATE: 11/13/2001 PATENT APPLICATION: US/09/614,221 TIME: 14:08:32

Input Set : A:\Sequence Listing for 05686.0004.NPUS00.txt

Output Set: N:\CRF3\11132001\I614221.raw

- 2 <110> APPLICANT: Karunanandaa, Balasulojini Yu, Jaehyuk Kishore, Ganesh M. 6 <120> TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED WITH STEROL SYNTHESIS AND METABOLISM 9 <130> FILE REFERENCE: 05686.0004.NPUS00 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/614,221 C--> 11 <141> CURRENT FILING DATE: 2000-07-11
- 11 <150> PRIOR APPLICATION NUMBER: US 60/142,981
 - 12 <151> PRIOR FILING DATE: 1999-07-12
 - 14 <160> NUMBER OF SEQ ID NOS: 626

41863 <210> SEQ ID NO: 626

ERRORED SEQUENCES

Editation 41864 <211> LENGTH: 434 41865 <212> TYPE: PRT 41866 <213> ORGANISM: Saccharomyces cerevisiae 41868 <400> SEQUENCE: 626 41870 Met Ser Gln His Ala Ser Ser Ser Ser Trp Thr Ser Phe Leu Lys Ser 41873 Ile Ser Ser Phe Asn Gly Asp Leu Ser Ser Leu Ser Ala Pro Pro Phe 20 25 41876 Ile Leu Ser Pro Thr Ser Leu Thr Glu Phe Ser Gln Tyr Trp Ala Glu 35 40 41879 His Pro Ala Leu Phe Leu Glu Pro Ser Leu Ile Asp Gly Glu Asn Tyr 41880 50 55 41882 Lys Asp His Cys Pro Phe Asp Pro Asn Val Glu Ser Lys Glu Val Ala 41883 65 70 75 41885 Gln Met Leu Ala Val Val Arg Trp Phe Ile Ser Thr Leu Arg Ser Gln 85 41888 Tyr Cys Ser Arg Ser Glu Ser Met Gly Ser Glu Lys Lys Pro Leu Asn 41889 100 105 41891 Pro Phe Leu Gly Glu Val Phe Val Gly Lys Trp Lys Asn Asp Glu His 41892 120 41894 Pro Glu Phe Gly Glu Thr Val Leu Leu Ser Glu Gln Val Ser His His 41895 135 140 130 41897 Pro Pro Met Thr Ala Phe Ser Ile Phe Asn Glu Lys Asn Asp Val Ser 41898 145 155 150 41900 Val Gln Gly Tyr Asn Gln Ile Lys Thr Gly Phe Thr Lys Thr Leu Thr 170 165 41903 Leu Thr Val Lys Pro Tyr Gly His Val Ile Leu Lys Ile Lys Asp Glu 185 180 41906 Thr Tyr Leu Ile Thr Thr Pro Pro Leu His Ile Glu Gly Ile Leu Val 195 200 205 41909 Ala Ser Pro Phe Val Glu Leu Gly Gly Arg Ser Phe Ile Gln Ser Ser

RAW SEQUENCE LISTING DATE: 11/13/2001 PATENT APPLICATION: US/09/614,221 TIME: 14:08:38

Input Set : A:\Sequence Listing for 05686.0004.NPUS00.txt
Output Set: N:\CRF3\11132001\I614221.raw

41910		210					215					220				
41912	Asn	Gly	Met	Leu	Cys	Val	Ile	Glu	Phe	ser	Gly	Arg	Gly	Tyr	Phe	Thr
41913		•				230					235					240
41915	Gly	Lys	Lys	Asn	Ser	Phe	Lys	Ala	Arg	Ile	Гуr	Arg	Ser	Pro	Gln	Glu
41916					245					250					255	
41918	His	Ser	His	Lys	Glu	Asn	Ala	Leu	Tyr	Leu	Ile	Ser	Gly	Gln	Trp	Ser
41919				260					265					270		
41921	Gly	Val	Ser	Thr	Ile	Ile	Lys	Lys	Asp	ser	Gln	Val	Ser	His	Gln	Phe
41922			275					280					285			
41924	Tyr	Asp	Ser	ser	Glu	Thr		Thr	Glu	His	Leu		Val	Lys	Pro	Ile
41925		290					295					300				
41927		Glu	Gln	His	Pro		Glu	Ser	Arg	Arg		Trp	Lys	Asp	Val	
41928						310					315					320
41930	Glu	Ala	Ile	Arg		Gly	Asn	lle	Ser		lle	Lys	Lys	Thr		Glu
41931					325			_		330	_	_			335	
41933	Glu	Leu	Glu		Lys	Gln	Arg	Ala		Arg	Glu	Gln	Glu		Val	Lys
41934				340					345					350		
41936	_	Val		Trp	Gln	Arg	Arg		Phe	Lys	Gln	Val		Tyr	Met	Asn
41937			355	_		_		360			~	~ 1	365			5. 1
41939			Thr	Ser	Asn	Asp		Glu	Lys	Ala	ser		Asp	Asp	Ala	Pne
41940		370				.	375	a1	T 10	G	17- 1	380		17-1	D	
41942	_	Lys	Leu	Ala	ser	_	Leu	GIN	Leu	ser	395	ьуs	ASI	val	Pro	
41943 41945		m b	Г а	τ1		390	Ta	Nan	A	T		Nan	W - 1	Con	m h m	400
41945	стх	1111	Leu	TIE	405	GIY	гуз	АЅР	ASP	410	цуѕ	ASP	vai	ser	415	ніа
41948	Lou	Uic	Trn	λra		λen	Luc	λen	Tan		Mot	Ara	Clu	Nen		Tla
41949	цец	1113	ттЪ	420	rne	дар	БУЗ	USII	425	1 1 P	IIC C	пту	GIU	430	Olu	110
41943	Thr	Ile		420					423					430		
41954	3	110					1	("	ſ		A	·j				
41957	2	,	1	1.	(~_	, \	e	7.			tur	e ant	>	r 1		
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/614,221 TIME: 14:08:39

Input Set : A:\Sequence Listing for 05686.0004.NPUS00.txt

DATE: 11/13/2001

Output Set: N:\CRF3\11132001\I614221.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:644 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7 L:644 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7 L:644 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 L:646 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:7 L:646 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7 L:646 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 L:648 M:258 W: Mandatory Feature missing, -(221> not found for SEQ ID#:7 L:648 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:7 L:648 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 L:661~M:258~W: Mandatory Feature missing, <221> not found for SEQ ID#:8 L:661 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:8 L:661 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 L:663 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:8 L:663 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:8 L:663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 L:665 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:8 L:665 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:8 L:665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 $L:667\ M:258\ W:$ Mandatory Feature missing, <221> not found for SEQ ID#:8 L:667 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:8 L:667 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 L:718 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11 L:718 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11L:718 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 L:757 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 L:757 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:763 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13 L:763 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13 L:763 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 L:778 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:14 L:778 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:14 L:778 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 L:788 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:14 L:788 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:14 $\rm L\!:\!788~M\!:\!341~W\!:$ (46) "n" or "Xaa" used, for SEQ ID#:14 L:809 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:15 L:809 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:15 $L:809 \ M:341 \ W: (46) \ "n" \ or "Xaa" \ used, for SEQ ID#:15$ L:844 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:17 L:844 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:17 L:844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:846 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:17 L:846 M:258 W: Mandatory Feature missing, $\langle 222 \rangle$ not found for SEQ ID#:17 L:846 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 L:923 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:21

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/614,221

DATE: 11/13/2001 TIME: 14:08:39

Input Set : A:\Sequence Listing for 05686.0004.NPUS00.txt
Output Set: N:\CRF3\11132001\I614221.raw

```
L:923 M:258 W: Mandatory Feature missing, \langle 222 \rangle not found for SEQ ID#:21
L:923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:992 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24
L:992 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24
L:992 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:994 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24
L:994 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24
L\!:\!994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:996 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24
L:996 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24
L:996\ M:341\ W:\ (46)\ "n"\ or\ "Xaa"\ used, for SEQ\ ID#:24
L:998 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24
L:998 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24
L:998 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:1013 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:25
L:1013\ M:258\ W: Mandatory Feature missing, <222> not found for SEQ ID#:25
L:1013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:1015 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:25
L:1015\ M:258\ W: Mandatory Feature missing, +222> not found for SEQ ID#:25
L:1015 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:1017 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:25
L:1017 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:25
L:1017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:1019 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:25
L:1019 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:25
L:1019 \ M:341 \ W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:1032 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:26
L:1032\ M:258\ W: Mandatory Feature missing, <222> not found for SEQ ID#:26
L:1032 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:1042 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1061 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1065 M.341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1067 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:1080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:1088 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L\!:\!1090 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:1092 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:1094 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:1096 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:1109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:1111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:1113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:41954 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:626
M:332 Repeated in SeqNo=626
```

STATISTICS SUMMARY

PATENT APPLICATION: US/09/614,221

DATE: 11/13/2001 TIME: 14:08:39

Input Set : A:\Sequence Listing for 05686.0004.NPUS00.txt

Output Set: N:\CRF3\11132001\1614221.raw

Application Serial Number: US/09/614,221

Alpha or Numeric: Numeric

Application Class:

Application File Date: 07-11-2000

Art Unit: OIPE

Software Application:

Number of Corrections: 2

Total Number of Sequences: 626 Total Nucleotides: 1068424 Total Amino Acids: 1861 Number of Errors: 2 Number of Warnings: 123

MESSAGE SUMMARY

258 W: 82 (Mandatory Feature missing)

270 C: 1 (Current Application Number differs)

271 C: 1 (Current Filing Date differs)

332 E: 2 ((32) Invalid/Missing Amino Acid Numbering)

341 W: 41 ((46) "n" or "Xaa" used)

arta	CRF Errors Correcte y the STIC S	Systems Branch
]	Changed a file from non-ASCII to ASCII	CRF Processing Day Edited by:
]	Changed the margins in cases where the sequence text was 'w	/ ·
]	Edited a format error in the Current Application Data section, sp	-
1	Edited the Current Application Data section with the actual curre applicant was the prior application data; or other	nt number. The number in
	Added the mandatory heading and subheadings for *Current App	
	Edited the "Number of Sequences" field. The applicant spelled or	
	Changed the spelling of a mandatory field (the headings or subhe	
	Corrected the SEQ ID NO when obviously incorrect. The sequence	ce numbers that were edite
	Inserted or corrected a nucleic number at the end of a nucleic line.	SEQ ID NO's edited:
	Corrocted subheading placement. All responses must be on the sa applicant placed a response below the subheading, this was moved inserted colons after headings/subheadings. Headings edited inclu-	d to its appropriate place.
/ -	Deleted extra, invalid, headings used by an applicant, specifically:	
	Deleted extra, invalid, headings used by an applicant, specifically: Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as_	secretary initials/filenamo
-	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as_	
-	Deleted: Inon-ASCII "garbage" at the heginging/end of titos:	
	Deleted: non-ASCII *garbage* at the beginning/end of files; page numbers throughout text; other invalid text, such as_ Inserted mandatory headings, specifically. Corrected an obvious error in the response, specifically:	
-	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as_	
· · · · · · · · · · · · · · · · · · ·	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as Inserted mandatory headings, specifically. Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is require Corrected an error in the Number of Sequences field, specifically:	ed, or viće versa.
	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as Inserted mandatory headings, specifically: Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is require. Corrected an error in the Number of Sequences field, specifically: "Hard Page Break" code was inserted by the applicant. All occurre	ed, or vice versa. Ences had to be deleted.
A De due	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as Inserted mandatory headings, specifically. Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is require. Corrected an error in the Number of Sequences field, specifically: "Hard Page Break" code was inserted by the applicant. All occurre	ed, or vice versa. Ences had to be deleted.
A De due	Deleted: non-ASCII "garbage" at the beginning/end of files: page numbers throughout text; other invalid text, such as_ Inserted mandatory headings, specifically: Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is require Corrected an error in the Number of Sequences field, specifically: "Hard Page Break" code was inserted by the applicant. All occurre leted ending stop codon in amino acid sequences and adjusted the to to a Patentin bug). Sequences corrected:	ed, or vice versa. Ences had to be deleted.

*Examiner: The above corrections must be communicated to the applicant in the first (Action. DO NOT send a copy of this form.